

EMME, A.M., kandidat biologicheskikh nauk.

Temperature and life. Nauka i zhizn' no.9:37-42 S '56.
(MLRA 9:5)

(Temperature--Physiological effect)

EMME, A.M.

Errors in biology ("Introduction to biology." P.L.Ivanchenko.

Reviewed by A.M.Emme). Biol.MOIP. Otd. biol. 61 no.2:93-99

Mr-Apr '56.

(MLRA 9:8)

(BIOLOGY)

(IVANCHENKO, P.L.)

EMME, A. M.

25-6-11/46

SUBJECT: USSR/Destruction of Agricultural Pests

AUTHOR: Emme, A.M., Candidate of Biological Sciences

TITLE: The Biological Protection of Plants (Biologicheskaya
zashchita rasteniy)

PERIODICAL: Nauka i Zhizn' - June 1957, # 6, pp 23-25 (USSR)

ABSTRACT: Agriculture has developed several chemical and biological
methods for destroying harmful plants and insects. So, for
example, insects are used for annihilating certain sorts of
weeds. Insects devouring useful crops can be destroyed by
other insects which are acclimatized for the special purpose
of destroying the other species' eggs and larvae. Another
method consists in the application of viruses and bacteria
to infect pests. The Siberian silkworm, for instance, is
being attacked with bacteriological methods. Soviet scien-
tists have developed a drug for infecting the caterpillar,
and experiments in the field have proved a mortality from
83 to 100 percent.
The article contains 6 pictures.

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25-6-11/46

TITLE: The Biological Protection of Plants (Biologicheskaya
zashchita rasteniy)

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE: At the Library of Congress

Card 2/2

AUTHOR: Emme, A., Candidate of Biological Sciences SOV/25-59-1-48/51
TITLE: The Heredity of Man (O nasledstvennosti cheloveka)
PERIODICAL: Nauka i zhizn', 1959, Nr 1, pp 78-79 (USSR)
ABSTRACT: In answer to a reader's request, the author gives a detailed explanation of Mendel's laws..

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EMME, A. M.

17(4)

AUTHOR:

SOV/29-59-4-23/26

Emme, A., Candidate of Biological Sciences, Head of the Laboratory of Biophysics of the All-Union Institute of Animal Breeding

TITLE:

Seasons of Life (Sezony zhizni)

PERIODICAL:

Tekhnika molodezhi, 1959, Nr 4, pp 35 -36 (USSR)

ABSTRACT:

In this popular-scientific article the author reports on the importance of photoperiodism. At all times a regulated sequence of the vital processes has been observed in nature. This activity which is due to the seasons could be explained only after the investigation of the influence of light on the vital processes. The changes in the vital processes influenced by the length of day was called photoperiodism. It was found that by photoperiodism various vital processes in the organism may be arbitrarily influenced. A peculiar characteristic of the photoperiodical reaction is their occurrence already after a short period of illumination. Thus, e.g. the light of a weak incandescent bulb is already sufficient to increase the laying capability of birds in

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Seasons of Life

SOV/29-59-4-23/26

winter or to cause an early blooming of the plants. It was found that photosynthesis is possible also in moon light. This proves the strong sensitivity to light of the organism. During short days the following was observed in animals and plants: During this period the plants accumulate nutritive agents, they form roots and tubers; insects, birds and other animals accumulate fat at a constant amount of food. This phenomenon is already utilized by animal breeders for the fattening of pigs in summer. This is done by covering the windows of the stable at day and by using no light at night. It was found in investigations carried out by the All-Union Scientific Research Institute of Animal Breeding that during the short days cows produce milk containing more fat and albumen. Short days are also favorable to the growth of wool and skin. By establishing short-day vital conditions the moulting of the laying hens may be caused at an earlier time and hence a longer period of laying may be attained. All these phenomena may be explained by the fact that metabolism depends on the length of the day. It was found that light absorbed by the eyes acts upon the brain and hypophysis. The latter produces numerous substances influencing through

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Seasons of Life

SOV/29-59-4-23/26

the blood the total organism. Growth, development of the animals, production of milk, reproduction, and various other processes depend on the functions of this gland. Since the substances produced by the hypophysis during the short or the long days are different, the processes caused by these substances take a different course. In the case of plants having neither eyes nor a nervous system light acts upon the leaves producing the necessary substances. Having recognized one of the most admirable functions of the organism - adaption to the changing vital conditions - man is now able to influence by his own will various vital functions of plants and animals. There are 5 figures.

ASSOCIATION: Vsesoyuznyy institut zhivotnovodstva (All-Union Institute of Animal Breeding)

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EMME, A.M., kand.biol.nauk

Biophysical problems in animal husbandry. Zhivotnovodstvo 21 no.2:
67-71 F '59. (MIRA 12:3)

1. Zaveduyushchiy laboratoriyey biofiziki Vsesoyuznogo instituta zhi-
votnovodstva. (Biophysics) (Stock and stockbreeding--Research)

EME, A., kand.biol.nauk

The nuclear ray is the scalpel of a plant breeder. Izobr.i rats.
no.5:50-53 My '60. (MIRA 14:2)
(Radiobiology)

EMME, A., kand.biolog.nauk

Alliance of biologists and chemists is a reliable union for pest
control. Tekh. mol. 28 no. 3:37-38 '60. (MIRA 14:4)
(Agricultural pests)

EMME, A., kand.biol.nauk

Life's daily rhythms. Tekh.mol. 28 no.11:34-36 '60.

(MIRA 13:12)

(Periodicity)

(Physiology)

EMME, A.M. (Moskva)

Photoperiodic reaction in reproduction. Usp. socv. biol. 49 no.2:
240-259 Mr-Apr '60. (MIRA 13111)
(REPRODUCTION) (PHOTOPERIODISM)

EMME, A., kand.biologicheskikh nauk

From the chemical laboratory of the cell. IUn.tekh. 5 no.8:48-50
Ag '61. (MIRA 14:12)

(VIRUS RESEARCH)

EMME, A.M., kand.biolog,pauk

New methods for pest control. Zashch. rast. ot vred. i bol.
6 no.8453 Ag '61. (MIRA 15:12)
(Insects, Injurious and beneficial—Control)

EMME, A., kand.biologicheskikh nauk

Our internal "clock." IUn.tekh. 6 no.11:54-57 N '61.
(MIRA 14:11)
(Periodicity)

EMME, A., kand.biolog.nauk

Photon showers. IUn.tekh. 6 no.12:58-61 D '61. (MIRA 14:12)
(Photons)

EMME, A., kand.biologicheskikh nauk

Key acids of life. Tekh.mol. 29 no.5:5-7 '61.
(Nucleic acids)

(MIRA 14:5)

EMME, A., kand.biologicheskikh nauk

Important progress in embriology. Tekh.mol. 29 no.8:22-23
'61. (MIRA 14:11)

(EMBRIOLOGY—HUMAN)

EMME, A., kand.biologicheskikh nauk; BILENKIN, D.

Steps of life. Znan. sila 36 no. 5:34-35 My '61.

(MIRA 14:5)

(Life--Origin)

EMME, A.M.

"Physiology of the nyctohemeral rhythm in animals" by M.E. Lobashov,
V.B. Savvateev. Reviewed by A.M. Emme. Usp. sovr. biol. 51
no. 2:250-251 Mr-Apr '61. (MIRA 14:4)
(PHYSIOLOGY) (PERIODICITY) (LOBASHOV, M.E.)

EMME, A.M.

"Life and habits of insects" by Rémy Chauvin. Biol. MOIP. Otd.
biol. 66 no.2:155-157 Mr-Apr '61. (MIRA 14:6)
(INSECTS--BEHAVIOR) (SHAUVIN, REMY)

KLOCHKOVA, A.Ya.; EME, A.M.

Effect of photoperiodic conditions on swine. Biol. MOIP. Otd.
biol. 66 no.3:134-143 My-Je '61. (MIRA 14:6)
(PHOTOPERIODISM) (SWINE—PHYSIOLOGY)

EMME, A.M.

Photoperiodism in farm animals. Biul. MOIP. Otd. biol. 66 no.4:156-
157 J1-Ag '61. (MIRA 14:7)
(PHOTOPERIODISM) (DOMESTIC ANIMALS)

EMME, Andrey Makarovich; POZHIDAYEVA, M.G., red.; YELAGIN, A.S.,
tekhn. red.

[The clock of living nature] Chasy shivoi prirody. Moskva,
Izd-vo "Sovetskaya Rossiya," 1962. 149 p. (MIRA 16:10)
(BIOLOGY—PERIODICITY)

EMME, A., kand. biologicheskikh nauk

Winged navigators. IUn. tekhn. 7 no.10:64-68 0 '62.
(MIRA 15:10)

(Orientation) (Birds—Migration)

EMME, A., kandidat na biologicheskite nauki

The clock inside us. Nauka i tekhnolozhiya 14 no.5:12-13 May '62.

EMME, A., kand. na biologicheskite nauki

From the laboratories of live cells. Prir i znanie 15 no.8:8-11
Ag '62.

EME, A., kand.biologicheskikh nauk

Excursion into the "Living Cell" Combine. Tekh.mol. 30 no.1:35-37
'62. (MIRA 15:2)

(Biological research)

EME, A., kand. biologicheskikh nauk

Spectacular chemical reactions; living light. Tekh. mol. 30
no.12:3-4 '62. (MIRA 16:1)

(Phosphorescence)

EMME, A.; BOBROV, L.

Instinct instead of compass. Znan.-sila 37 no.8:36-38 Ag '62.
(MIRA 16:5)
(Animal intelligence)

EMME, A., kand.biol. nauk

Energy sources of life. IUn.tekh. 7 no.7:40-41 J1 '63.
(MIRA 16:8)
(Metabolism)

AZERNIKOV, V.; ARLAZOROV, M.; ARSKIY, F.; BAKANOV, S.; BELOUSOV, I.;
BILENKIN, D.; VAIEL', I.; VLADIMIROV, L.; GUSHCHEV, S.;
YELAGIN, V.; YERESHKO, F.; ZHURBINA, S.; KAZARNOVSKAYA, G.;
KALININ, Yu.; KELER, V.; KONOVALOV, B.; KREYNDLIN, Yu.;
LEBEDEV, L.; PODGORODNIKOV, M.; RABINOVICH, I.; REPIN, L.;
SMOLYAN, G.; TITARENKO, V.; TOPILINA, T.; FEDCHENKO, V.;
EYDEL'MAN, N.; EME, A.; NAUMOV, F.; YAKOVLEV, N.;
MIKHAYLOV, K., nauchn. red.; LIVANOV, A., red.

[Little stories about the great cosmos] Malen'kie rasskazy o
bol'shom Kosmose. Izd.2., Moskva, Molodaia gvardiia, 1964.
368 p. (MIRA 18:4)

EMME, D. K.

"Studies Of Interspecific Hybridization Of Tuber Bearing Potatoes Sectio Tuberarium Bitter,
Genus Solanum L." (p. 1093) by Emme, D. K.

SO: PREDECESSOR OF JOURNAL OF GENERAL BIOLOGY. (Biologicheskii Zhurnal) Vol. VI, 1934, Nos. 1-6

EMME, S.I.

**Assembly for recovering and reprocessing beet root tips and waste. Sakh.
prom. 27 no.9:29-31 '53. (MLRA 6:11)**

1. Kupyanskiy sakharney zavod. (Sugar industry--Equipment and supplies)

S/648/61/000/004/002/002
A004/A101

AUTHOR: Emm, Z.G.

TITLE: The wind conditions in the lower troposphere at westerly intrusions into Central Asia during the winter half year

SOURCE: Tashkent. Sredneaziatskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 4 (19), Moscow, 1961, Voprosy regional'noy sinoptiki, 119 - 125.

TEXT: The author analyzes averaged characteristics of the wind field in the lower three kilometers. 53 cases of westerly intrusions into Central Asia during the winter half years between 1943 - 1955 were selected to investigate the wind conditions in the lower troposphere. All these 53 cases are sufficiently clearly expressed processes spreading over the whole of Central Asia. Each of the intrusions was divided into three phases of its development according to the location of the front of the cold-air surge. The first phase (threatening phase) indicates such a position on the synoptical map when the cold-air front is located over the Caspian Sea. During the second phase (phase of maximum development) the intrusion front is located over the central parts of Central Asia, while

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A004/A101

The wind conditions ...

during the third and final phase the cold-air front withdraws to the East beyond the boundaries of Central Asia. The ballooning data were processed for each phase separately at 22 stations of Central Asia. The author presents maps of the pre-dominating air currents at a level of 1 and 3 km. For the plotting of the maps all 22 stations calculated the prevailing directions and the weighted mean velocity of winds in the quadrant of maximum recurrence and also the recurrence (in per cent) of the predominant direction within this quadrant. The calculation methods used were fully derived from a former article by the author [Ref. 4: Z.G. Emm, Aeroklimaticheskaya obrabotka vetra po tipam sinopticheskikh protsessov (Aeroclimatic processing of winds according to the types of synoptical processes). Sb. "Meteorologiya i gidrologiya v Uzbekistane". Izd. AN UzSSR. Tashkent. 1955]. The author presents a detailed analysis of the effect of the orographic conditions on the winds over Central Asia at levels of 1 and 3 km during the first phase, enumerates the two districts where at the 1-km level the highest values of maximum wind velocities are found (Ursat'yevskaya-Dzhizak area and western parts of Central Asia) and points out that at the 3-km level the orographic effect on the wind conditions are less pronounced. He describes the distribution of air currents over Central Asia during the second and third phases and presents appropriate maps. Concluding he emphasizes that during the cold

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A004/A101

The wind conditions ...

period the wind conditions in the lower troposphere (1 - 3 km) over Central Asia during the different phases of westerly intrusions are markedly different. However, a general orographic distortion both of the direction and of the velocity of the wind in mountainous regions can be noticed during all three phases. The degree of this distortion varies at different stations. In spite of the common, determining features, the various westerly intrusions possess individual characteristics. Although these characteristics show at different stations a wide range of predominant wind directions, an upper limit (70 - 80% of recurrence of wind directions clearly prevails at most of the stations. There are 6 figures and 4 Soviet-bloc references.

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EMMER, J.

"Ultrashort Waves. (To Be Contd.)", P. 66, (RADIOTECHNIKA, Vol. 4, No. 3, Mar. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

EMMER, J.

"Ultrashort Waves. (To Be Contd.)", P. 90, (RADIOTECHNIKA, Vol. 4, No. 4, Apr. 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

EMMER, J.

"Ultrashort Waves. (To Be Contd.)", P. 116, (RADIOTECHNIKA, Vol. 4, No. 5, May 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (KEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

EMMER, J.

"Ultrashort Waves. (To Be Contd.)", P. 140, (RADIOTECHNIKA, Vol. 4, No. 6, June 1954, Budapest, Hungary)

SO: Monthly List of East European Accessions, (EBAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

EMMER, J.

"Ultrashort Waves. (To Be Contd.)" p. 188 (RADIOTECHNIKA. Vol. 4, No. 7/8, July/Aug. 1954; Budapest, Hungary.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

EMER, J.

"New Loud-speaker System." p. [4] of cover. (RADIOTECHNIKA. Vol. 4, No. 11, Nov. 1954; Budapest, Hungary.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

EMER, J.

"Ultrashort Waves." (To be contd.) p. 262 (RADIOTEKHNIKA. Vol. 4,
No. 11, Nov. 1954; Budapest, Hungary.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4,
April 1955, Uncl..

EMER, J.

"The Association Of Hungarian Freedom Fighters Receives an Invitation to the International Contest of Radio Telegraphers in Leningrad." p. 264 (RADIOTECHNIKA. Vol. 4, No. 11, Nov. 1954; Budapest, Hungary.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, April 1955, Uncl..

~~MAIER, J.~~

Operation and manufacture of rapid telegraph keys, p. 136,
RADIOTECHNIKA, (Magyar ^Ünkentes Hovedelmi Szovetseg) Budapest,
Vol. 5, No. 6, June 1955

SOURCE: East European Accessions List (EEAL) Library of Congress,
Vol. 4, No. 12, December 1955

EMMER, J.

Operation and production of rapid Morse keys. p. 176. RADIOTECHNIKA.
Budapest. Vol. 5, No. 7/8, July/Aug. 1955

SOURCE: East European Accessions List (EEAL) Vol. 5, No. 6 June 1956

EMMER, J.

Building UHF antennas. p1 208. RADIOTECHNIKA, Budapest. Vol. 5, no. 9,
Sept. 1955.

SOURCE: East European Accessions List(REAL), LC. Vol. 5, no. Feb.1956

EMMER, J.

Technological lessons from an international ultra short wave contest. p. 277

Technological description of the VT R 545 set. p. 279.

Vol 5, no. 12, Dec. 1955. RADIOTECHNIKA. Budapest, Hungary.

So: Eastern European Accession. Vol 5, no. 4, April 1956

EMMER, J.

Let us develop the movement for amateur ultra short-wave operations. p.25.
RADIOTECHNIKA. (Magyar Onkentes Honvedelmi Szovetseg) Budapest.
Vol 6, no. 2, Feb. 1956.

SOURCE: EEAL, Vol 5, no. 7, July 1956.

EMMER, V.

CZECHOSLOVAKIA / Chemical Technology. Chemical Products and

J-4

EMMERIKH, E.D.

Setting of grain in compound crossing of interspecific hybrids.

Sbor. trud. asp. i mol. nauch. sotr. VIR no.5:293-296 '64.

(MIRA 18:3)

EMMERIKH, F.D., kand.sel'skokhoz.nauk

Resistance of mountain barleys to the Swedish fly. Zashch. rast.
ot vred. i bol. 8 no.1:25-26 Ja '63. (MIRA 16:5)

1. Vsesoyuznyy institut rasteniyevodstva, Leningrad.
(Barley--Disease and pest resistance) (Frit flies)

EMMERIKH, F. D., Cand. Agri. Sci. (diss) "Barleys of Mountain Areas of Various Origins, their Biological Characteristics and Importance for Seed Selection," Leningrad, 1961, 20 pp. (Leningrad Agri. Inst.) 200 copies (KL Supp 12-61, 281).

EMMERIKH, F.D.

Evaluating the resistance to powdery mildew (*Erysiphe graminis* D.S.
F. hordei Marchal) of collections of barley from mountain regions.
Sbor. trud. asp. i mol. nauch. sotr. VIR no.5:267-271 '64.

(MIRA 18:3)

P/039/60/000/007-8/004/004
A177/A026

AUTHORS: Emmerich, R.; Golemba M. and Turek, K.

TITLE: Novelties From the Field of Metallurgy. Rolling. Ultrasonic Examination of Slabs by Means of Echo Sounder

PERIODICAL: Hutnik 1960, No. 7-8, pp. 308-309

TEXT: Ever increasing demand for better quality sheet steel used by various branches of machine industry, require more strict examination of semi-products from which sheets are made. Hitherto applied examination methods, being casual and of a destructive nature, are no longer adequate. A new, quick, accurate non-destructive method was found in ultrasonic examination. First ultrasonic testing of slabs by means of an impulse defectoscope and a special echo sounder was carried out at the central laboratory of the Huta Lenina (Metallurgical Plant) in Nowa Huta. The results were excellent; whenever the ultrasonic waves hit a fault, disfiguration of the oscillogram appeared. These investigations were supported by a destructive control examination, using the Baumann method and deep etching, preceded by testing with a magnetic defectoscope. As a result of their investigations the authors arrived at following conclusions: 1) Examination of cold slabs by means of ultra-

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P/039/60/000/007-8/004/004
A177/A026

Novelties From the Field of Metallurgy. Rolling. Ultrasonic Examination of Slabs
by Means of Echo Sounder

sonic defectoscopy, using a special echo sounder, allows to detect accurately any internal faults in slabs. 2) Because of the great accuracy of this method, even very small defects in slabs can be detected; the range of detection can be altered by selecting the proper intensification factor; 3) Slabs covered with scale can also be examined by means of this method; 4) Examination can be performed very quickly. After certain training, one slab can be thoroughly examined within five minutes. There are 5 photographs.

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1.8000

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P/039/61/000/011/002/002
D001/D101

AUTHORS: Emmerich, Roman, Master Engineer, and Turek, Kazimierz

TITLE: Application of transverse ultrasonic waves for detecting of thin sheet lamination

PERIODICAL: Hutnik, no 11, 1961, 414-416

TEXT: The purpose of this research carried out at the Laboratorium Centralne (Central Laboratory) of the Metallurgical Plant im. Lenin was to find a simple method of detecting lamination in steel sheets before further processing of same. The problem was solved by application of ultrasonic vibration and the little known phenomenon of complete damping of transverse waves passing across a steel sheet of less than critical thickness. The detector used in the test consisted of a Polish-made defectoscope and a supersonic roll probe with two piezoelectric quartz transducers attached to its frame by means of plastic wedges which give proper feed and pick-up angles to the wave train. One transducer serves as a vibration transmitter and the other as a receiver. The vibrations are reflected as a steady pulse on an oscillograph screen. Whenever the detector frame moves over a lami-

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P/039/61/000/011/002/002
D001/D101

Application of transverse ultrasonic waves ...

nated section of sheet, the pulse on the screen vanishes and thus indicates the defect. The check of sheets to be rolled can be carried out while they proceed on a conveyor towards the rolling mill. The short-lived cathode ray tube can be replaced by a neon light or a voltmeter. There is 1 photo and 1 table.

ASSOCIATION: Huta im. Lenina, Kraków (Metallurgical Plant im. Lenin).

Card 2/2

HABERSKI, Aleksander; DLUGOSZ, Aleksander; EMMERICH, Roman

Experiments in using radioactive isotopes in studies
on the coking process. Koks 9 no.4:126-134 J1-Ag '64.

1. Department of Coking Practice of the School of Mining
and Metallurgy, Krakow.

VOZNESENSKIY, B.N., inzh.; EMMERIKH, R.G., inzh.

Half-turn noncontact transducer. Mekh. i avt. proizv. 18
no.8:30-31 Ag '64.

(MIRA 17:10)

EMMI, Peter (Pikler), dr.

General problems of disease prevention in nurseries and infant
homes. Nepegeaszseguy 36 no.2:31-38 Feb 55

(INFANT WELFARE
nurseries, prev. of dis.)

TABLE I BOOK EXPLANATIONS 807/5895

Mezner, Tsvetkovskiy, and Ivanovskiy. Institute of Chemistry Metallurgy. Institute of Metallurgy, Moscow

Prevalent alloy (Precision Alloy) Moscow, Metallurgizdat, 1960. 23 p. (Series: Itai: Soviet Union, v. 2) Krievskiy, 2, 105 copies printed.

Additional Sponsoring Agency: USSR. Gosstatizvopros planovaya kumissiya.

M., D. I. Gorbunov; M. of Publishing House: Ye. I. Levit; Tech. Ed.: Ye. I. Vaynshteyn.

REMARKS: This book is intended for engineers and scientific personnel in the metallurgical industry, production, and electrical equipment industries, as well as for industrial design and research in the production of precision alloys. It may also be useful to technical drawing advanced technical schools.

CONTENTS: The articles in this collection present the results of investigations conducted in recent years by the Central Scientific Research Institute of Ferrous Metallurgy (Vostochnyy nauchno-issledovatel'skiy institut chernoy metallurgii). The articles deal with industrial techniques of producing soft magnetic alloys, properties and structure of the alloys at extremely low temperatures and in high-frequency magnetic fields, deformation textures, magnetization, the galvanomagnetic effect, volume changes, etc. Some articles are concerned with the investigation of deformed hard magnetic alloys. In 3 articles are mentioned. The articles are accompanied by references, both Soviet and foreign.

Shchegolev, D. I. and G. I. Kuznetsov. Improved Dynamic Grade Electrical Steels (Part I and II Additions).

Shchegolev, D. I., and E. P. Martynova. Alloys for Magnetic-Magnetic Core

Pyatov, E. P. Investigation of the Properties and Structure of Soft Magnetic Alloys of Various Elements

Gorshkov, M. I. Dependence of Dynamic Permeability of Ferromagnetic Materials on Their Microscopic Heterogeneity

Gorshkov, M. I. Dynamic Magnetic Characteristics of Soft Magnetic Alloys Under Conditions of High-Induction Values

Belov, I. O. Influence of Certain Ferromagnetic Materials in Weak High-Frequency Magnetic Fields (10³-10⁴ oer)

Podkov, I. I., and G. A. Kuznetsov. Generation Magnetization of Ferromagnetic Alloys in the Two-Frequency Range

Pyatov, E. P., and E. P. Fedorov. Longitudinal Galvanomagnetic Effect in Iron-Nickel Alloys

Pyatov, E. P. Investigations of the Energy of Magnetic Anisotropy of Iron-Nickel Alloys

Pyatov, E. P., and E. V. Melnikov. Magnetization of Nickel-Iron-Nickel Alloys

Melnikov, E. V., E. P. Pyatov, and A. I. Rad'kov. Volume Magnetization of Iron-Nickel-Aluminum Alloys

Belov, I. O., and E. P. Melnikov. Magnetization and Some Other Properties of Iron-Aluminum Alloys

Shchegolev, M. I. Texture Analysis Attachment for the DRS-501 X-Ray Machine for Investigation of Deformation Textures in XOP Alloy Thin Strip

Shchegolev, M. I., E. P. Belov, and E. P. Melnikov. Texture and Anisotropy of Magnetization of Some Iron-Base Alloys

Shchegolev, M. I., E. P. Belov, and E. P. Melnikov. Investigation of High-Permeability Iron-Aluminum Alloys Containing Additions of Manganese or Manganese

Shchegolev, M. I. Investigation of the Kinetics of the Establishment of Magnetic Texture in 6% Ferralloy During Low-Temperature Annealing

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93

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121

129

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150

161

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RAVDEL', M.P.; EMIL', K.V.

Effect of tempering on the properties of iron-nickel alloys with
addition elements, Sbor. trud. TSNIICM no.25:117-125 '62.
(MIRA 15:6)
(Iron-nickel alloys--Heat treatment)

6/776/62/000/025/008/025

AUTHORS: Ravdel', M. P., Emmil', K. V.

TITLE: The effect of anneal on the properties of alloyed Iron-Nickel alloys.

SOURCE: Moscow. Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii. Sbornik trudov. no. 25. Moscow, 1962. Prezhizionnyye splavy. pp. 117-125.

TEXT The paper describes an experimental investigation of the kinetics of the change of the magnetic properties of Fe-Ni alloys alloyed with V, W, Cr, Mn, and Cu in the course of their isothermal anneal. The composition of the alloys tested was Fe-10Ni-10Cr-10Mn-10V-10W-10Cu. The alloys were smelted in an open induction furnace and were cast into ingots. Forging, hot rolling, and cold rolling into a strip 0.15 mm thick were performed. The magnetic properties were measured by the hysteresis method with an induction coil at temperature (T) on toroids assembled from disks shaped as a ring with an outer diam of 25 mm and an IDiam of 20 mm. The investigation of the kinetics of the change of magnetic properties in the course of low-T anneal were performed in an equipment which permits one to make the measurements of the magnetic properties at low T directly after vacuum treatment of the specimens, i.e., without removing them from the furnace. The electrical resistance (ER) was measured on wire

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The effect of anneal on the properties of

S/776/62/000/025/008/025

specimen 1.0 and 0.3-mm diam by the potentiometric method, both at room T and at T within the 20-800°C range. A spiral specimen wound made of wire 0.3-mm diam was placed into a quartz tube in which a vacuum of the order of 2×10^{-5} mm Hg had been produced. Four full-page graphs summarize the changes in magnetic properties and ER of the alloys investigated as a function of the time of holding at anneal T. The investigation performed here is devoted to a study of the magnetic properties of a number of Fe-Ni alloys, alloys with V, Cr, and W after an anneal which brings them to the formation of the so-called K state. In the ternary alloys, Fe-Ni-V, the dependence of the magnetic permeability on the holding time at the optimal anneal T has a fairly sharp maximum, and a rigorous maintenance of the optimal heat-treatment regime is indispensable for the obtaining of the extremal values of the magnetic characteristics. In quaternary alloys, Fe-Ni-W-Mo or Fe-Ni-W-V, the maximum on the curve of the magnetic properties vs. the time of holding during anneal is more rounded, and the heat treatment required to obtain desired properties can be reproduced more readily. The character of the anomaly of the ER remains the same as in the ternary alloys, but the level of the corresponding magnetic properties is higher. There are 5 figures, 1 table, and 1 reference (2 Russian-language Soviet and 2 German-language papers by F. Assmus, Z. f. Metallkunde, no. 42, 1951, 295, and Metall, no. 7, 1956, 56).

Card 2/2

MATOK, Gyorgyne; HORVATH, Zoltanne; KORACH, Mor; EMOD, Gyula; HEINCZ, Gyorgy;
PESTHY, Laszlo

A new type of primary electric source used in telecommunication
techniques; also, remarks by Z.Horvath, and others. Muszaki kozl
Mata 26 no.1/4:321-333 '60. (EEAI 9:10)

1. Tavkozlesi Kutato Intezet (for Matok)
(Telecommunication)

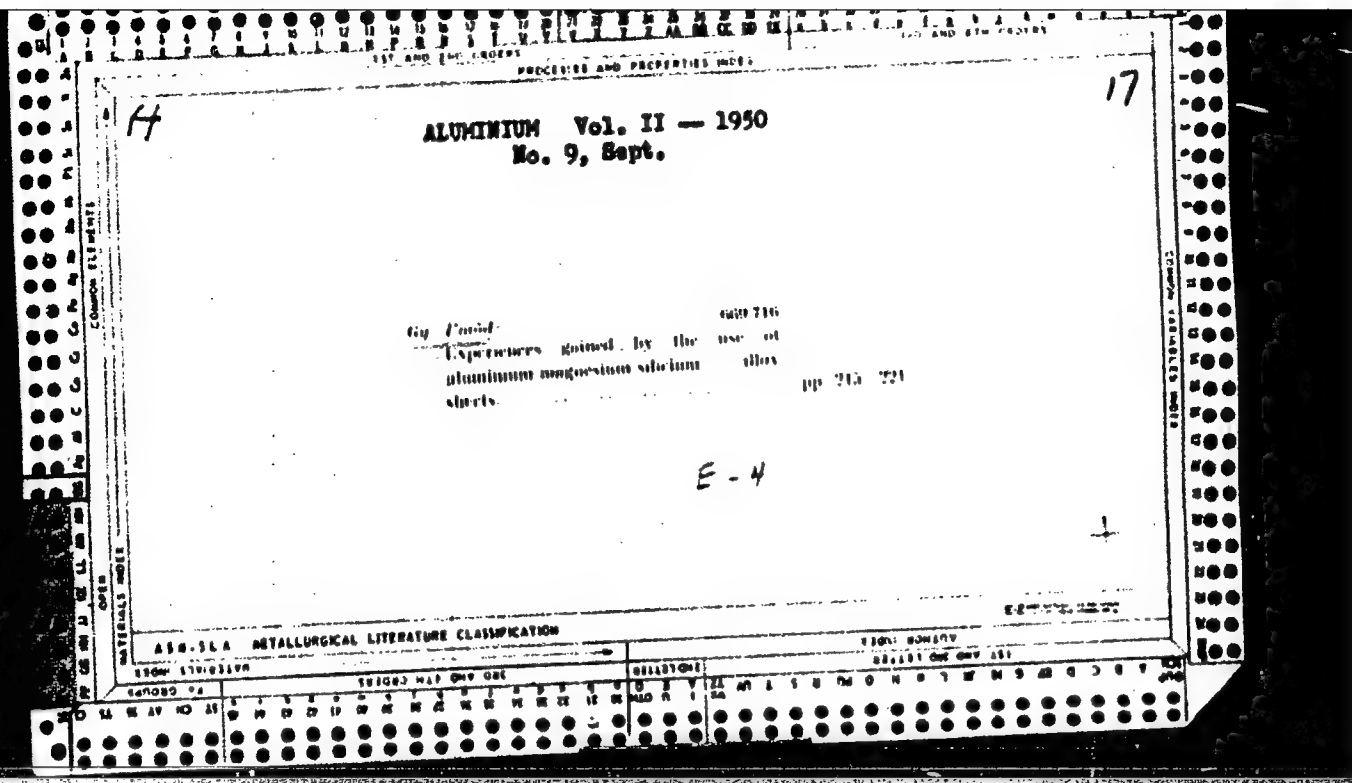
Met. Abstracts

19

The Production of Aluminium and Aluminium-Alloy Sheets for Deep-Drawing.
Gyula Enod (Aluminium (Budapest), 1949, 1, (8), 184-190). In Hungarian.
The prodn. of Al and Al-alloy sheet is discussed with special ref. to the
effect of cold working and heat-treatment on its bendability and deep-drawing
properties. Attention is drawn to some common faults due to unsuitable
treatment.--I.S.M.

CA

Experience on the use of plates of aluminum-magnesium-silicon alloys. *Cyrus-Kowal*. Aluminum 2, 205 5, 215 21 (10.20). Summary of literature data on the effect of alloying elements on the mech. properties of sheets. Expts. with Al sheets alloyed with Mg 0.7, Si 1.0, and Mn 0.6% showed that stress values were 22.3-23.5 ksi when annealed at 500° or 21-22 ksi when annealed at 600°. In the manu. of containers for liquefied propen but one test result was obtained by annealing at 500-600°, then aging 6 hrs. at 175°. It is essential to cool rapidly after aging. Si generally increased and Mg decreased the strength. Alloying with 0.6% Cu had advantageous effects on the strength. *István Fényes*



[illegible]

Refining of molten magnesium. I. Jakóby, G. Emel, and P. Vajh (*Aluminium, Budapest, 1961*, 8, 145-149; *Metal Ind.*, 1962, 10, 864).—The vac.-melting process for the purification of Mg is described with special reference to the removal of Fe and Si.
R. H. CLARK.

EMOD, GY.

"New data on the enrichment of iron ore of Gyongyosoroszi." (p.284). KOHASZATI
LAPOK (Magyar Banyaszati es Kohaszati Egyesulet) Budapest. Vol 6, No 12,
Dec 1951.

SO: East European Accessions List, Vol 6, No 8, Aug 1954.

"APPROVED FOR RELEASE: Thursday, July 27, 2000

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APPROVED FOR RELEASE: Thursday, July 27, 2000

CIA-RDP86-00513R00041211(

EMOD, GY.

"Nickelproof, forgeable aluminum alloys of high resistance" p. 97, (KOMASZATI LAPOK, Vol. 8, no. 5, May 1953, Budapest, Hungary)

EMOD, GY.

"Finishing Magnesium Castings." p. 247 (Kohaszati Lapok. Vol. 8, no. 12 Dec. 1953
Budapest.)

vol. 3, no. 6

SO: Monthly List of East European Accessions. /Library of Congress June 1954, Uncl.

EMOD, Gyula; NEMETH, Pal

Causes for magnesium casting waste material and the method
of its elimination. Koh lap 9 no. 2: Supplement: Ontode
5 no. 2: 41-46 F '54.

EMOD, Gyula; NEMETH, Pal

Examination of some Hungarian mine and synthetic sands from
the point of view of magnesium casting. Koh lap 9 no. 4:
Supplement: Ontode 5 no. 4: 88-94 Ap '54.

EMOD, Gyula

Heat treatment of magnesium-alloyed castings. Koh lap 9
no. 2: 76-85 F '54.

HUNG.

9372* Application of Easily Removable Risers on Non-Per-
meous Metals Casting. *Leírás a könnyű elválasztású és le-
választóval. (Hungarian.) Márton Sándor, Pál Márton, and
Gyula Enődi. *Útlevél*, v. 6, no. 3, Mar. 1933, p. 59-61.*

Composition and treatment of the separating plates; dimensions
of risers that can be broken off. Diagrams, photographs. 3 ref.

N

FMOD, CYLZA

HUNG. /11631* The Role of Ammonium Nitrate in the
Ammonium Nitrate Process in the
Hungarian, Czech and
Slovak Republics
Exported to
the
USSR

EMCD, GY.; JAKOBY, L.: NEMET, P.

Pressure risers for metal castings. p.29. (Kohaszati Lapok. Ontode. Vol. 7, no. 2, Budapest. Vol. 11, no. 2, Feb. 1956.)

SO: Monthly List of East European Accessions (EEAL) LC., Vol. 6, no. 7, July 1957. Uncl.

EMOD, Gy

EMOD, Gy. - Casting in preparing molds. p. 366.
The corrosion and protection of surfaces. p. 370.
Vol. 8, no. 10, Oct. 1956
GEP - Budapest, Hungary

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4 - April 1957

EMOD, GY.

Increasing the heat utilization of metal-smelting furnaces. p. 210 (Kohaszati
Lapok Budapest Vol. 11, no. 9, Sept. 1956 Ontode Vol. 7, no. 9)

SO: Monthly List of East European Accessions (EEAL) LC., Vol. 6, no. 7, July 1957. Uncl.

EMOD, GY.

Processing magnesium sheets. p.414

KOHASZATI LAPOK. (Magyar Banyaszati es Kohaszati Egyesulet)
Budapest, Hungary
Vol. 13, no.9, Sept. 1958

Monthly List of East European Accessions (EEAI) LC., Vol. 8, no.7, July 1959
Uncl.

20036

1087 1418 1045 1454

H/015/50/011/008/002/002
B122/B227

AUTHOR: Emőd, Gyula

TITLE: Some data on the copper-aluminum-titanium phase-diagram

PERIODICAL: Üntöde, v. 11, no. 8, 1960, 178-183

TEXT: The author's purpose is to furnish additional data on the ternary alloy Cu-Al-Ti with Al contents up to 16% and Ti contents of 1-3%. Other researchers (V. N. Vigdorovich and co-workers, Izvestiya Ak-Nauk SSSR, Moscow, 1958, 3, 110) investigated such ternary alloys with lower Al and Ti contents only. K. P. Kalinin and M. Z. Spiridonova (Tsvet. Met. 1, 1959, 82) are credited for a later contribution to the still much discussed problem of the binary alloy Cu-Ti. The author also refers to his dissertation on the ternary alloy presented in 1954 to the Hungarian Academy of Sciences. For the preparation of the ternary alloys, auxiliary Cu-Ti alloys of up to 5% Ti content were made in an open crucible under charcoal cover, and auxiliary Cu-Ti alloys of 10-30% Ti were made in the Tamman vacuum furnace. The test ternary alloys were prepared in a furnace of silite bars, where the copper was first melted under charcoal cover,

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B122/B227

Some data on the copper-aluminum-titanium ...

then the Cu-Ti or a Cu-Al₄₅-Ti₅ auxiliary alloy was added. Finally, the still required aluminum was added in the form of pure metal or of an auxiliary alloy of Cu-Al₅₀. The test ternary alloys were composed so that the alloys of 0.5-16% Al, corresponding to vertical sections of 1% Ti (or of 3% Ti respectively) were heat-treated together. Heat treatment proceeded in horizontal and in vertical direction: a vertical section of the phase-diagram includes alloys of various composition heat-treated at the same temperature, a horizontal section, on the other hand, refers to one alloy heat-treated at different temperatures. Besides, corresponding to various aluminum contents, heat treatment was also made at the same temperature, that is, in horizontal rows. The author presents the binary diagram Cu-Al according to J. Veró's "Metallográfia I" (1950). The Cu-Ti diagram published in the article also includes measurements of V. N. Vigdorovich and Yonkainen, which the author did not find quite consistent with his own. According to the ternary diagram of the author (Fig. 3), corresponding to 1% of Ti, the solubility of Ti increases in the presence of Al, but the α -field of the Cu-Al binary alloy shrinks in consequence of this very much. This was confirmed by V. N. Vigdorovich

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22026

Some data on the copper-aluminum-titanium ...

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B122/B227

too. The original α -region bifurcates to α proper and to $\alpha + \text{Cu}_3\text{Ti} + \gamma$, that is, a new phase presents itself. Above 565°C , in the $\alpha+\beta$ - and β -regions, besides the β -phase Cu_3Ti also shows up as a separate phase.

All this becomes still more pronounced with 3% Ti (Fig. 4). According to the microphotographs, the structure of the binary Cu-Al alloys (at 7.5% Al) becomes heterogeneous with 1% Ti. With 3% Ti, the structure is very heterogeneous. Titanium has a grain-refining effect of advantage to castability and deformability. Cu-Al-Ti alloys with 1-3% Ti are heat treatable. There are 19 figures, 2 tables, and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc. The reference to English language publication reads as follows: Dannison, J, Inst. Met. 1953, 120.

ASSOCIATION: Magyar Tudományos Akadémia (Hungarian Academy of Sciences)

Card 3/5

189200

H/014/60/000/008/003/003
E190/E435

AUTHOR: Emőd, Gyula

TITLE: Some Data on the Copper-Aluminium-Titanium
Equilibrium Diagram

PERIODICAL: Kohászati lapok, 1960, No.8, pp. 178-183

TEXT: Although titanium is of importance as an addition to aluminium-bronzes, no data have been published on the Cu-Al-Ti ternary equilibrium diagram. Therefore, the author examined the structure of alloys containing 0-15% Al and 1-3% Ti. The melting of copper-titanium hardeners with up to 5% Ti was carried out in open crucibles under charcoal cover whilst that of hardeners with 10-30% Ti in a Tamman-furnace in vacuo. A Cu-45% Al-5% Ti hardener was made up (by adding an Al-10% Ti hardener to copper) for introducing small Ti contents into the bronzes. In preparing the ternary alloys, copper was melted first in a silite-rod furnace, desoxydized with 0.5% Al, then the Cu-Ti and 50% Cu-50% Al hardeners added. The alloys containing titanium were ductile up to 13% Al content. Alloys belonging to any one section were heat treated together, for 8 hours to 1 week, at 300-950°C and then etched in ammonium sulphate or in a mixture
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VC

H/014/60/000/008/003/003
E190/E435

Some Data on the Copper- ...

of 100 cm³ H₂O, 30 cm³ HCl and 4 g FeCl₃ or they were electrolytically polished in a mixture of 700 cm³ ethyl-alcohol, 200 cm³ perchloric acid and 100 cm³ glycerine. A few control tests on binary Cu-Ti alloys put the solubility of the α -phase to 8.4% at 885°C whilst at 20°C the Cu₃Ti compound was present even at 0.5% Ti. Sections taken through the ternary diagram at 1% and 3% Ti concentration are shown in Fig.3 and 4 respectively. Microsections revealed that the originally homogeneous structure of 7.5% Al-bronzes becomes heterogeneous with Ti contents as low as 1%. The structure becomes markedly heterogeneous both at 600 and 280°C with 3% Ti content. The acicular β phase observed in 10% Al-bronzes at 900°C gives partly way to the α phase in the presence of 1% Ti and the proportion of α phase increases with 3% Ti; at 900°C increasing Ti content led to a marked refinement in the $\alpha + \beta$ structure. In 14% Al-bronzes at 500°C, the quantity of α -phase is reduced and a new heterogeneous phase produced between the α , $\alpha + \beta$ and $\alpha + \gamma_2$ phases. Thus, the addition of titanium to aluminium-bronzes causes a contraction of the α phase; some of the Ti is solution but most of it forms a new phase

VC

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Some Data on the Copper- ...

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E190/E435

besides being present in the form of the Cu_3Ti compound. Ti also gives a marked grain refining effect. There are 19 figures, 2 tables and 8 references: 2 Hungarian and 6 non-Hungarian.

Card 3/3

Fig.3.

Fig.4.

20609

H/014/60/000/010/002/004
E190/E580

18.1210A

AUTHOR: Emöd, Gyula

TITLE: The Influence of Heat-Treatment and of Alloying
Elements on the Strength and Corrosion of Al-Mg-Zn
Alloys with 8-9% Mg + Zn Content

PERIODICAL: Kohászati lapok, 1960, No.10, pp.440-444

TEXT: This is the second part of the paper, the first part
of which was published in No.9, pp.385-389. The paper is part
of a "Candidate" thesis.

The work is aimed at establishing the effect of alloying elements
on the plastic deformation, heat treatment, strength, electrical
conductivity and corrosion resistance of Al-Mg-Zn alloys with
8-9% total Mg and Zn content. 99.5% Al, electrolytic Zn and
99.9% Mg were melted in an electric resistance furnace, under a
flux composed of 36% MgCl₂, 20% CaF₂, 34% KCl and 10% NaCl, to
give alloys of the following nominal composition:

1. Al-6%Mg-2%Zn, 2. Al-5.5%Mg-3%Zn, 3. Al-3%Mg-5%Zn,
4. Al-2.5%Mg-7%Zn, 5. Al-1%Mg-8%Zn.

80 mm diameter, 120 mm long chill-cast blocks were scalped to
70 mm diameter, homogenized at 450°C for 12 hours and extruded at

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The Influence of Heat-Treatment ...

H/014/60/000/010/002/004
E190/E580

450°C into 8 x 24 mm rods on the 250 ton press of the "Femipari Kutató Intézet" (Non-Ferrous Metals Research Institute). Ram speed was 3.5 m/min and force dropped from 200 kg/cm² in extruding alloy No.1 to 110 kg/cm² in extruding alloy No.5. The extruded blooms were cold rolled to 2.5 mm thickness, annealed at 320°C for two hours, cooled in the furnace and cold rolled to 1 mm (60% cold work). The effect of intermediate heat treatment was studied on blooms rolled to 3 mm, then quenched from 400°C in water and cold rolled to 1 mm (67% cold work). Vickers hardness was measured on specimens homogenized at 200, 300, 400, 420, 450, 480°C for 1/2, 1 and 2 hours, and aged at 20°C for 3, 5 and 10 days or at 100 and 130°C for 4, 16 and 48 hours. Tensile test specimens were homogenized at 420 and 480°C for 1 hour and aged at 20°C for 10 days or at 100°C for 48 hours. Electrical conductivity was measured on homogenized and aged material, and corrosion resistance of similarly treated tensile test pieces tested in a 3% NaCl, 0.1% H₂O₂ aqueous solution for 31 days (stirring test). The alloy No.1 exhibited the highest, alloys Nos. 4 and 5 the lowest resistance to deformation both in cold and hot working. This is

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The Influence of Heat-Treatment ... H/014/60/000/010/002/004
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explained by the more severe lattice distortion caused by Mg atoms. In order to compare behaviour in heat-treatment systematically, the $MgZn_2$ content of the five alloys was calculated; alloy No.4 is close to the α_4 - $MgZn_2$ quasi-binary section, whilst No.1 contains 5.7%, No.2 5% and No.3 2.1% excess Mg, No.5 2.7% excess Zn. The results of solution treatment on Vickers hardness showed that heating at 200°C for 1 hour released internal stresses and hardness dropped; the drop was bigger at 300°C but the effect of solution treatment became evident at 400°C and above only. The behaviour of the Mg-rich alloys Nos 1 and 2 suggests that Zn hinders the dissolution of Mg. For this reason, these alloys harden less, i.e. they are better homogenized in solution treatment than alloys Nos. 3, 4 and 5, all of which contain more Zn. The temperature of solution treatment (between 400-480°C) had a small effect only that disappeared on precipitation treatment. The time required to obtain fully age-hardened properties was several months at 20°C, 48 hours at 100°C and 16 hours at 130°C. The hardness of the high Mg No.1 and No.2 alloys hardly changed at all (approximately 30 kg/mm² tensile strength, 10 kg/mm² proof strength and 90-110 Vickers hardness, 25% elongation, whereas that of the high Zn

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The Influence of Heat-Treatment ... H/014/60/000/010/002/004
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alloys (Nos. 3, 4 and 5) showed a considerable improvement on age hardening (the tensile strength rose from 30 to 40-45 kg/mm², proof stress from 10-12 to 35-40 kg/mm², elongation dropped from 20 to 18% and Vickers hardness rose from 90 to 160 kg/mm²). Ageing at 130°C for 48 hours caused a coagulation of MgZn₂ particles with a consequent loss in properties. The electrical conductivity showed a similar trend. It was lowest in the high Mg alloys (Nos. 1 and 2, approx. 17-18 m/ohm.mm²) and in these it was unaffected by heat treatment. In contrast, precipitation made the high Zn alloys very sensitive to heat treatment, the conductivity rose from 22 (in No.3) and 23 (in No.5) m/ohm.mm² of the homogenized material to 25 and 26 m/ohm.mm² in the one precipitated at 120°C. The corrosion resistance decreased with MgZn₂ content. Alloys Nos. 1 and 2 showed a good resistance especially in the solution treated condition. Alloy No.3 (with a 5.9% MgZn₂ content) was reasonably corrosion resistant although in the artificially aged condition it was fairly susceptible. Alloy Nos. 4 and 5 gave a poor resistance even in the naturally aged condition and the artificially aged ones were heavily attacked. All the above

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The Influence of Heat-Treatment ... H/014/60/000/010/002/004
E190/E580

results prove that it is not the total Mg + Zn content but the proportion of Mg to Zn that primarily determines the properties and behaviour of these alloys. There are 19 figures, 6 tables and 15 references: 2 Hungarian and 13 non-Hungarian.

[Abstractor's Note: This is an abstract of the complete paper.]

Card 5/5

EMOD, Gyula

Some data on the phase diagram of copper-aluminum-titanium. K6h lap
93 no.8: Suppl. Ontode 11 no.8:178-183 Ag '60.

SOLTI, Marton; EMOD, Gyula

Analysis of gating systems for metal casting. Koh lap 93 no.8: Suppl:
Ontode 11 no.8:184-187 Ag '60.